

REMARKS

Reconsideration of the above identified application in view of the preceding amendments and the following remarks is respectfully requested. Firstly, the applicant and its attorneys wish to thank the Examiner for the indication of the allowable subject matter in original claims 2, 3, 5 and 7 to 22.

Dealing first with the amendments to the specification, paragraph 11 is being amended at this time so as to provide a statement of one aspect of the invention which corresponds closely to amended claim 23 of the application. It is respectfully submitted that these amendments to the specification are fully supported by the specification and drawings of this application as originally filed and no new matter has been introduced into the application either by the amendments to paragraph 11 or the amendments to paragraph 31.

In order to more clearly and patentably distinguish over the cited U.S. published patent application 2002/0030183, claim 23 has been amended to make it clear that each bar section has "an attachment arrangement for attaching the bar section to said bottom edge section of the curtain". This attachment arrangement is described in the initial portion of original paragraph 31. In particular, the attachment arrangement is provided firstly by the provision of two angle members which make up each bar section and then the use of bolts and nuts to attach these angle members together so that they sandwich "between them the bottom edge section of the curtain". Also, the bolts can extend through holes in the bottom of the curtain. Such an attachment arrangement is of course not taught in the cited U.S. patent application to Albritton since this application is not directed to a bottom bar assembly for a roll-up curtain but rather it is directed to a breakaway support post for a highway guardrail.

The fact that each connecting member in a bottom bar assembly “is connected to at least one of the bottom bar sections by a shear connecting device” is supported by the passage in the original specification extending from line 5 of page 10 to line 11. The shear bolts 101 referred to in the original paragraph can be accurately described as shear connecting devices.

Turning now to the rejection of claims 23 to 27 on the grounds that they are anticipated by the teachings of Albritton, it is respectfully submitted that claim 23 as now amended does clearly distinguish over this reference and in a patentable manner. The breakaway post described in this reference extends vertically, is intended for mounting in the ground and for attachment to an adjacent guardrail, and serves quite a different purpose than the bottom bar assembly recited in claim 23. The post has an upper vertical portion 26 and a lower portion and these are connected by a rotatable coupling mechanism at 29. As the upper and lower portions are in the form of steel I-beams, clearly there is no provision in either portion for attaching the portion to the bottom edge section of a curtain, a feature now clearly required by claim 23. Also as these portions extend vertically in use, they cannot both be described as “bottom bar sections”.

Also, in the reference, in order to connect the upper portion to the lower portion, flat metal plates are used, including plate 71 and additional plates 83, 98 and 116. It appears that each of these plates is connected rigidly to the adjacent portion of the post by means of a weld (see page 4, column 2, end of paragraph 36). The two flat connecting plates on each side of the post are connected together firstly by a long pivot bolt 126 and secondly by two shear bolts 128 and 131. Each shear bolt releasably secures its two plates against relative rotational movement.

It will be seen from the aforementioned review that claim 23 further distinguishes over this reference by the requirement in claim 23 for “at least one connecting member connected to both of said bottom bar sections” and extending across the hinge. In the reference there are two

connecting plates on each side and neither of these connecting plates is connected to both the upper portion of the post and the bottom portion but rather one or the other. In addition, claim 23 now specifies that the at least one connecting member is "connected to at least one of said bottom bar sections by a shear connecting device" whereas in the cited reference, each of the shear bolts merely connects two of the small connecting plates together and does not join either of the connecting plates to the upper portion or the lower portion of the post.

Finally, claim 23 also requires that the at least one connecting member be "able to disconnect from at least one of said bottom bar sections", whereas in the reference, it is the two adjacent connecting plates that disconnect upon an impact. The rectangular connecting plates themselves in the reference remain permanently attached to their respective post section.

In view of these several differences, it is respectfully submitted that amended claim 23 and the claims dependent thereon are in condition for allowance.

The amendments made to dependent claim 25 are simply consequential amendments which were necessary due to the changes in claim 23.

With respect to the obviousness rejection of claims 1, 4 and 6, it is respectfully submitted that present claim 1 does in fact patentably distinguish over the combination of U.S. Patent No. 5,964,270 to Kirkey et al. and U.S. Patent No. 6,397,921 to Wartenbergh. With respect to the Kirkey et al. reference, this U.S. patent admittedly describes a flexible roll-up door in the form of a curtain which has two opposite side edges. Along these side edges are curtain edge sections which are thicker than the main area. However, these side edge sections of the curtain are specifically formed with sloping shoulders directed towards the center of the curtain and extending vertically when the curtain is unwound. The side edge sections move up and down in guide channels 52, 54 and it is possible, under an impact force, for the side edge sections of the

curtain to be pulled out of these guide channels. The preferred illustrated guide channel includes a front plate 56 which has a longitudinally extending front portion 62, a side leg 64 and a sloping inner edge portion 66. It will thus be understood that when air pressure is acting on the surface of the flexible curtain, such as under windload conditions, the sloping shoulder 32 of the curtain edge section will press against the sloping inner edge portion 66 of the respective guide. This known curtain and guide construction gives rise to a significant problem with door operation in that under a pressure load or windload, the edge sections can bind in the tapered sections of their respective guides, causing the door to be wedged and unable to operate.

Taking into consideration the above comments, it will be seen that current claim 1 distinguishes over the roll-up door assembly of Kirkey et al. by reciting the following features:

- (1) The side edge portions of the sheet must have a elongate, vertical, inner edge surfaces that extend substantially perpendicular to the remaining portion of the sheet when the sheet is unrolled and flat (In the cited reference, these side edge portions slope at a substantial obtuse angle to the remaining portion of the curtain);
- (2) Biasing means for biasing said windbar assembly to the slot narrowing position to normally hold the respective vertical side edge portion within said slot, while permitting the side edge portion to be released from the slot through its opening upon an impact (In Kirkey et al., there is no such biasing means but only the door guides which are made flexible and resilient to allow release of the door edge sections).

Turning now to the second applied reference, namely, U.S. Patent No. 6,397,921 to Wartenbergh, this reference does not teach a roll-up door construction but rather it is directed to a roller screen intended for mounting in an opening. The screen, which can be made of gauze

has a bottom pull beam and there can be guides for guiding both the pull beam and the side edges of the screen. The guides each consist of a partial cylindrical outer housing which is fixed to the window or door frame and a partial cylindrical inner housing which is free to rotate in the outer housing. Both housings are formed with a longitudinal slot along their length and these slots are arranged in an overlapping position. As shown in Figure 6, the curtain edges can be formed with so-called guide cams 14 which have a circular cross-section. Because the inner housing 6 is made of resilient material, it is possible to pull out each guide cam from its respective inner housing in the manner shown in Figure 6. This arrangement is said to help prevent damage to the screen, the cams 14, and the guides under an impact situation.

However, from this review, it will be seen that the Wartenbergh reference does not overcome the aforementioned deficiency in the Kirkey et al. construction. In particular, the so-called guide cams in Wartenbergh because of their circular cross-section do not have the required elongate vertical, inner side edge surfaces "that extend substantially perpendicular" to the remaining portion of the sheet (or screen). In other words, with the Wartenbergh construction, if it were adapted for use in a door curtain on which wind load can exist, it would likely suffer from the problem of the cam 14 wedging in the slot formed by the inner housing.

In addition, it is submitted that, like Kirkey et al., Wartenbergh also does not teach the required "biasing means for biasing said windbar assembly to said slot narrowing position." In this respect, the Wartenbergh construction is very similar to the Kirkey et al. construction in that both rely upon the resiliency of the material used to form the guide to allow release of the curtain or screen from the guide under an impact condition.

The applicant takes issue with the Examiner's position that Figure 6 of Wartenbergh shows spring biasing means. In fact, it simply shows the possibility of the arc shaped guide

sections being pulled outwardly in an impact condition to permit release of the cam 14. The Examiner is referred to the description in the patent in column 4, lines 33 to 44.

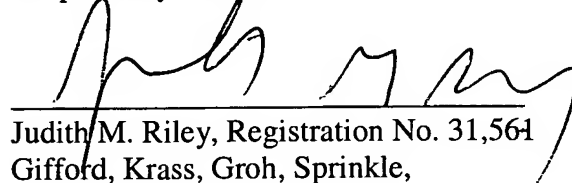
A further difficulty with the Wartenbergh construction is that the resilient inner housing 6 would suffer from fatigue if the cam 14 is pulled out repeatedly from the guide channel. Such fatigue is generally not a problem with the applicant's roll-up door assembly because of the use of biasing means to bias the windbar assembly to the slot narrowing position.

With respect to dependent claim 4, it is submitted that this claim further distinguishes over the cited combination in that it specifically requires that the biasing means be provided by "tension spring assemblies securing said windbar assembly to its respective guide assembly". It is respectfully submitted that there is no such tension spring assembly taught by Wartenbergh and the Examiner admits that no biasing means for the windbar assembly is provided by Kirkey et al.

It is submitted that dependent claim 6 is allowable over the cited combination for the same reasons as stated for claim 1.

In light of the above submissions, reconsideration and allowance of this application are respectfully requested.

Respectfully submitted,

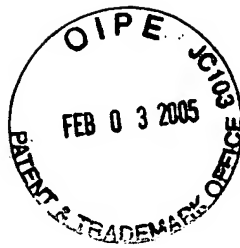


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